ANT/SHE/03

NEWS

SHERATON

0042

ENDERBY

LAND

1977

(1)

3401-3500
3901-4000
5301-5400

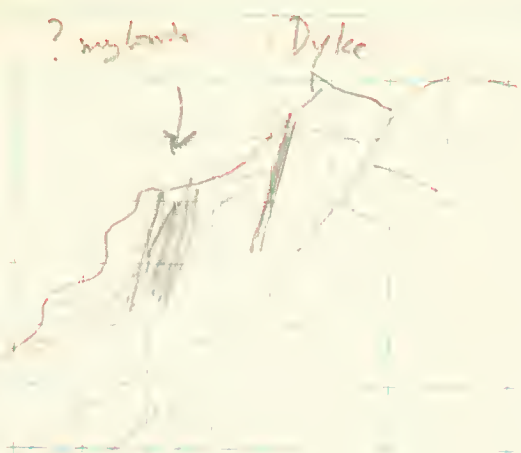
INDEX

Page	Subject

Mt Marsland   4/1/77   Mcleod Ntk Ran 40983

① N side – base of cliffs near [illegible] road
trending dipping, fairly massive brown-weathering
charnockitic gneiss cut by small fault with
slickensides. Dip 110° (20° angle)
Some light, pink garnetiferous layers
interbanded, but quite subordinate here.
3401 massive charnockitic gneiss

In large embayment on NE side —
② mostly massive charnockitic gneiss with
subordinate light coloured layers. Dip
090/-20°, and fairly regular. Basic
dyke – vertical, trend 080. 2 more dykes
to W, similar trend.
Some coarse grained segregations in gneiss
contain bluish or blackish quartz and pink
feldspar. Otherwise the gneiss is extremely
massive (cf Mt Selwood). Some coarse (0.5 cm) black opx
(2A) 3402 Dolerite dyke.
3403-5 Oriented samples of dolerites (PW)
(2B) 3406, 7 White leucogneiss.
3408 massive grey charnockitic gneiss
The light bands here contain some


? inclusion
Dyke

garnet, but only locally. Rocks are leucocratic, with white quartz and pink feldspar. Some bands rather altered (garnet → biotite?)

(3) Summit of ridge at point – massive charnockitic gneiss. Bdg 290/10°
Dykes to W, variable direction, most mostly shallow (open antiform and synform) – fold axes and a'ps trend roughly N–S
Dyke (2 generations?) in cliffs of main ridge spur on N side
3409 massive charnockitic gneiss

(4) Ridge (saddle) further to W (above embayment of 2nd landing strip)
Layered gneiss – charnockitic (brown), light, leucocratic gneiss with rare garnet (quite dark grey in fresh surface)
Bdg 10° to NE. On cliffs on S side one dyke, with an asymmetric fold with a mylonite zone (? could be dyke, but unlikely) – very steep limbs
Some of the less garnet gneiss as

quite well foliated. Some Cu staining noted
3410-12 Grey leucogneiss with garnet
3413 Mafic pyroxene gneiss (some coarse-grained pyroxene segregations) — slightly discordant
3414 Grey gneiss with rounded, very ~~4~~ dark grain of quartz(?)

Dip 040/10

(5) Spur on E side of large embayment
massive charnockitic gneiss cut by fresh dolerite dyke (trend ~020)
3415 dolerite

(6) Near W end of hill — embayment on SW side — W side near end of spur.
Evenly dipping, well banded gneisses dipping at 110°/10°. Some leucocratic, dark grey gneiss, with dark qtz and some garnetiferous layers, some evidence of yellow-green — green chlorite aggregates 4

and local deformation.

3 4's grey garnet gneiss, psammitic (some retrogression / alteration of garnet etc) - quite strongly foliated.

5/1/77 **Mt Riviss - Loren** [MKR/L Runs 0710]

2nd spur from E on N side - saddle area

(1) Dip 120/15 but rather variable. Mostly leucocratic garnet gneiss with blurred qtz or grey qtz segregations. Some black pyroxene ± biotite layers. Pods (1 - 10's of cms) of pyroxene or garnet are present - qtz may be darker below adjacent to these.
Rocks look ± quite deformed, ± poorly foliated. Dolerite dykes trend 220° and cross metamorphic zones but contacts.
Next spur to W, dip is gentle to S - mod strongly layered. Summit area dip 30° to S - strongly layered; ridge to NW of summit also strongly layered, with tight folds (axes ∥ to foliation), cut by large dyke, dip S

Eastern spur - layered gneiss

underlies massive brown charnockitic gneiss

3417 Leucocratic garnet gneiss
3418 Leucocratic garnet gneiss
3419 Mafic (? pyroxene) layer in garnet gneiss
3420 ? Porlenti dyke
3421 ? Fine grained, altered dyke margin
3422 deformed mafic rock (appears to be slightly discordant

(2) Middle of S side [illegible] of embayment

Banded gneiss, dip S (180) at ~20°–30°
Much leucocratic garnet gneiss, some qtz-rich layers with blue qtz. Some massive quartz-feldspar gneiss. Higher cliffs + possible mylonite zones (shears). Also conformable or subconformable basic
Much massive qtz/feld gneiss to S of with lithic (dip 140/20). Lineation ~190°/25.
Much evidence of retrogression – shears etc (conformable mostly). Mafic gneiss layers

have ~ 50% pyroxene

3423 Sandst greiss with blue qtz's
3424 Grey leucogneiss
3425 Mafic pyroxene gneiss
(2A) 3426 Altered qtz/fold gneiss (sandst → chlorite?)
3427 " Altered mafic gneiss

(3) Near W end (S side)
Massive qtz fold gneiss with ~~near~~ minor mafic pyroxene rich layers Az 30 to 190°
2 mafic dykes (1 dolerite) Trend 080°, both are ~~rather~~ sheared, parallel to margins, the larger dyke especially (20m)
Location 190/30
3428 Massive grey qtz/fold gneiss
3429 Sheared dolerite (larger dyke)
3430 Dolerite from thin dyke (1 metre)
3431-4 Dolerites for paleomagnetic dating (PW)

Mt Soucek — SW corner on ridge — MKR-L Run 16

① Massive garnet qtz fdsp gneiss Dip 190°/40°. Some kbnd/qtz-rich segregations, some layers contain garnets up to 1cm across.

3435 Garnet quartz feldspar gneiss

Nt cliffs of [illegible] — mod well layered gneiss — dip 160/50°

Peacock Ridge

② Unnamed N(k to E) [illegible] Soucek. Dip 160/45 — quite well layered gneiss — qtz fdsp (grey) well pyroxene/garnet, major pyroxene gneiss etc garnet is quite abundant locally, as is pyroxene, esp in major layers. Also coarse segregations of Pyx/qtz/fdsp

3436 Segregation of coarse pyroxene/qtz/fdsp in major gneiss

3437 Qtz/fdsp gneiss (grey) mod altered major (rock is slightly deformed

3438 Major pyroxene gneiss. Retrogression is common, particularly ∞ along the coastal shear

③ Graham Peak —— Summit

Rather massive banded gneisses, dip 160°/30. Some grey leucogneiss ± garnet and pyroxene; relatively abundant mafic gneiss.

3439 Grey qtz/feld gneiss — looks rather altered (retrogressed)

3440-5 Dolerite dyke from Deavers Ridge (P.W.)

2/1/77 Frozen mts

Mt Fiddler? + Mt K to SW (350/55 at SE)

Mod layered gneiss; fairly even dip ~320°/50 / some light-coloured, quartzo-feld layers; some mafic layers (inc boudinaged mafics) Tight folds

McNaughton Ridge, similar (N ridge) — dip much the same, quite well layered gneiss); On main ridge dips variable — some major folds? tight to isoclinal folds

Some irregular granite(?) veins (may be locally discordant. 1/3 from N end)

mixed light ? granitic gneiss with minor folded darker layers

6

Cont

N West – dip to N 45°

SE end dip to SE

Granite grains larger could be field more..

Rocks N to SW – dipping & layered. grains

N313/70

Mr Douglas.

All fairly massive red gneiss, with several mafic dykes (~ NS trend)

Nth Wall Mt Robinson — Nye Mts R.S 1184

(1) near Summit (towards E end)
Strongly banded acid qtz / fsd gneiss with some ~~coarse~~ coarse layers.

More leucocratic types are quite fissile (aligned biotite XLs). Tight intrafolial folds are common and larger, isoclinal folds seen in cliffs.
large mafic or ultramafic body – 10's of metres across

3446 Biotite gneiss
3447 Ultramafic pod

Dip 160/80

Coarse grained, pink biotite pegmatite trend 150° (~5–10 metres in longest case)
The large pegmatite is strongly deformed by a shear zone which dips 060/45
The pegmatite is strongly deformed and finely recrystallized, with large feldspar augens up to 10 cms across

10

Smaller white biotite pegmatites trend 180°, dip E at ~50-60°. Typical width of these is ~30 cms.
In the gneisses biotite is conspicuous, + garnet in some layers.
? Hornblende in mafic layers
Gneisses in general are quite similar to Molodezhnaya. Grey quartz pods, veins and segregations noted (including in core of large pegmatite). Also coarse pegmatitic segregations. No basic dykes seen, but impression is mafic gneiss may be more common than elsewhere in central Erdelyi Land

Gravity reading on hill immediately N of Mt Douglas — almost highest point (flat area)

SE end Mt Borchelshy — dykes or mafic body
Mt Gordon — mafic layer or dykes
Mt Alekshayev — dip toward Mt Kay.
Red gneiss at top mafic dykes 11
2 dykes on ridge 1 m² to E

Mr. Renouard - photo

S end of Mt Giddings, dip to NE

6/1/77

Mt Renouard SE side – strongly layered gneiss with some tighter folds

[Mt Coddington Run 6 2100]

Sapphirine Ntk (E end of ridge)

11.30 am MBT

−4°C

Baro No 985
890.4 dec P
890.5 inc P
(uncorrected – subtract 2.02?)

510/63
890.31
890.40
[890.33]

① 3448, 9 Sapphirine rich rocks

Ntk 2 mls to ENE

12.50 pm

−2°C

510/63
893.82
893.88

985 = No.
893.86
893.89
(uncorrected)

② Rk 110/-25° (but variable dip)

Similar to sapphirine rock
Qtz feld gneiss with garnet and
hypersthene. Some mafic or ultramafic
pods (opx x phlog? cpx) — relatively
light in colour. Gneisses are generally
qtz/feld with bluish quartz-rich
layers common. Thin sapphirine
rich layers with garnet and white
?feldspar are quite common in qtz/feld/
garnet gneiss. The layers locally
have hyp or garnet-rich ~~selvages~~
selvages. The rocks show evidence
of mobilization — ie. layers are
discontinuous and pinch out.
Qtz/feld layers are often discordant
to these (and to bluish qtz layers).
Minor folds are common. Much evidence
of retrogression in shear zone.
Zone thin 5-20 cm x cutting qtz
feldspar hypersthenites.
This mylonite cross cut layering

3450-2 layered sa-rich
rock with feldspar (? mg orthoclase)
3453-5 ? Sa rock
N.B. { 3457 layered gneiss with ? sapphirine
{ 3456 mafic gneiss
3458 ? Ultramafic (or mafic) pod

③ **Ntk 2 mls ENE** – summit of ... peak
Baro no. 510 — Other baro 4/5

864.42
864.49 — −2°c 2.50 pm

Dip 310 / 60 – 70

Well layered garnet gneiss –
some very massive leucocratic (10%
garnet) and almost devoid of foliation.
Quartz is very blue in many rocks
Some blue quartzite layers (from a few cms up)
Some layers of massive garnet (rare)
Gneiss have almost a granulite
texture with fine grained granoblastic
... (irregular dist^n of ...

Coarser-grained areas.

Some layers are garnet rich (up to 12% — aggregates with bluish quartz-rich gneiss) — and some contain sillimanite. A few thin layers have minor ?sapphirine.

A few mafic layers are also present and pyroxenite pods. ~~[illegible]~~

3459 garnet leucogneiss
3460 garnet sillimanite gneiss
3461 garnet ?sapphirine gneiss
3462 mafic pyroxene gneiss

Mt. Sones – E cliffs near N end – melt lake ① [Mcleod Run 5 2090]

0°C   4.20 p.m.

Baro	985	510
	914.83	914.69
	914.82	914.71

(uncorrected)

3463 Charnockite from NE outcrop (base of cliff) – massive red gneiss with a few lighter layers. Unnamed Nbk ④

15

Dip 130°/80

Well banded gneisses — qtz fld pegmatite — white fld, bluish grey quartz + red garnet — some individual bands are quite massive — variable degrees of deformation — some qtz are streaked out lenticles. Rocks look, on the whole, quite deformed — pyroxene pods (~3cm) with pegmatitic segregations in pressure shadow regions. Also cross cutting qtz-fld ± garnet pegmatites grade into calc-silicate rocks. Some very garnet rich (50%) layers and mafic (?pyroxene) granulites, garnet / blue quartz rocks etc.

3464 Leucocratic garnet gneiss

3465 Garnet ?pyroxene gneiss

3466 Garnets (? sillimanite / ? sapphirine) gneiss

3467 ? pyroxene granulite

(2) <u>Mt Sones</u> — W side, half way up cliffs.

0°C 5.25 pm

Baro No	985	510
	914.59	914.53
	914.69	914.57
	(uncorrected)	

Leucocratic garnet gneiss — qtz/feld/rare garnet similar to Casey [?] locality, + more mafic gneiss — some aluminous layers — mixed sillimanite + garnet + possible sapphirine (in fine grained layers with hypersthene) Dip 250/45 Just E of landing — but major, fairly tight fold (steeply plunging)

3468 — Sill ? Sa garnet hyp gneiss
3469 — Sill garnet gneiss

9/1/77

Mt Robinson — Nye Mts R B, 1184

(2) NNE Gnd W of — NE corner of cliffs Trend 220° — dip vertical.

(3) Mt Robinson — base of W cliffs

Abundant strongly layered garnet gneisses — dip 130° / 80

Garnet is abundant in acid — and basic rocks — ga amphibolite; ga qtz feld gneiss; ga qtz gneiss (minor); also some massive ? charnockite — looking gneiss. Mafic gneiss contains amphibole + biotite ± garnet.

Rocks of strongly folded with steeply dipping axes and associated lineation and rodding — the more strongly folded rocks are also strongly deformed — streaked out biotite — garnet porphyroblasts etc

Some minor calcareous layers —

in one case with xenoliths

18

of gneiss in calcite-rich matrix with reaction zone (specimen)
X-cutting pegmatite (slightly - - -) with biotite and ? hornblende, conc. at margins (spec) — apparently later than the folding. Garnet rich gneiss bands are boudinaged and enclosed in more leuco-cratic garnet gneiss

3470, 1 Garnet hornblende gneiss
3472 Amphibolite
3473-4 Acid garnet gneiss
3475 massive ~~g~~ "charnockitic" gneiss
3476 ~~K~~-Acid gneiss
3477 Mafic gneiss
3478 marble with ~~gneiss~~ inclusions (2 spec) of quartzite
3479 ? Hornblende from pegmatite margin

④ Flat area near S end

Hb/biotite gneiss — some well foliated gneiss (esp. biotite gn) — no garnet seen. Much amphibolite and mafic gneiss. Red, massive gneiss is abundant in this area — some has a charnockitic look and may contain pyroxene

mafic pyroxenite and/or hornblendite
pods occur. Minor calcite rich pods
with phlogopite and ? amphibole
Some pegmatites trend 220°.
Dip 180/80 lineation steeply dipping
Minor intrafolial folds common
Generally like Molodezhnaya.
Bands of pods, segregations [illegible] occur

3480 Massive biotite gneiss
3481 Massive and [illegible] ? pyroxene gneiss?
3482 ? pyroxenite pod
3483 Hornblende biotite gneiss (rather mafic)
3484 Mafic gneiss (? pyroxene)
3485 Pyroxenite pod (? diopside)

Alderdice Peak Nye Mts R. 9, 0144

(1) S side
Red and green + mafic hornblende gneiss
dip 150/70 lineation dip 210/45.
Hblende and biotite gneisses similar
to last localities
Some pyroxenite pods
Hb/biotite gneiss and bt gneiss
[illegible] interlayered [illegible]

coarser grained ?/3 // fdd gneiss (massive, leucocratic) + some pegmatitic segregations.
X cutting pegmatites (20 cm wide) are white, diffuse margins, contain biotite

Red V acid gneiss in quartz [illegible] massive, [illegible] characteristic appearance.

3486 Massive acid gneiss (characteristic appearance)
3487 Hbl-[illegible] / biotite gneiss
3488 ?? gneiss [illegible]

Krasnaya Ntk - [illegible]

(1) [illegible] NyeMts R 9, 0137

Red acid gneiss + black amphibolite: basic gneiss — interfolded + mobilized acid gneiss — many minor to mesoscopic folds + folded pegmatite and later discordant [illegible] pegmatite.
General strike [illegible], near vertical [illegible] very contorted. Folds in lowgrade gneiss [illegible] inclusions in granitic gneiss

3489 Layered acid gneiss
3490 basic gneiss.
3491 Massive granitic gneiss
(v. poorly foliated, with garnets)

Krasin Ntk

Nye Mts, R11, 1165

Similar to Cook Lacolith
dip 160/80
Red acid granite present
Both mafic gneiss — granitic gneiss
Cooks very massive near mafic gneiss
Complex.

Northern most Ntk

Vertical red, felsic massive gneiss
with some mafic layers — similar to
main Ntk (like a NE-SW.

Papanin Ntk

Nye Mts R12, 0496

① Similar to Krasin
Steep to vertical granitic gneiss
with garnets — some more mafic and
mafic (SS) layers interbanded with
homogeneous acid gneiss (latter

predominates

The darker layers are isoclinally folded and rather boudinaged (pinch & swells) — many die out laterally
The massive granitic gneiss is very weakly foliated in outcrop and probably intrusive (mobilized gneiss)

3432 Garnet granitic gneiss
3433 Granitic gneiss

The mafic layers contain biotite and/or hornblende, garnet in the granitic gneiss

Dip SE ~ 35
further to E — vertical — Trend 070

Greenhall Nick

Vertical trend 060
S part. — massive red gneiss + dark bands [illegible] end — banded gneiss [illegible] [illegible] light band.

NtK 4 mls N of Greenhall Nye MtS R11, 1152

(1) N end rather massive gneiss, rest in
well layered gneiss — gt biotite gneiss
amphibolite etc + white marble
layers. pyroxenite (cpx + opx ?)
lenses pods also.
Marble has folded inclusions
of amphibolite, looks cl mobilised
Dip 160/70°
Some cutting pegmatites (not
[illegible])
Minor folds are common —
[illegible] isoclinal [illegible]
[illegible]
[illegible]
3494 Garnet biotite gneiss
3495 " " "
3496 Amphibolite
3497 Diopside / opx

Some garnet-bearing quartzite

2nd from N of Ward Nks   Nye MWR 9, 0151

On Mell lake

N end of Nk reddish green with garnet

etc, pegmatites

3498 granitic gneiss

3499 " "

Mell lake area massive granitic

gneiss (with knots ? hypersthene) —

charnockitic appearance

10/1/77

Main peak of Dismal Mts — near Dismals

3500 Massive granitic

(charnockitic) gneiss

Red colour results [illegible]

stretched out [illegible] mafics

A few mafic pods, grey green

layers

Most of the rocks contain

mafics [illegible] for pyroxene,

but generally fairly leucocratic

Mt Saw Garnet biotite gneiss – well banded, (white gneiss with biotite pyroxene) X cutting pegmatite with garnet + biotite + conformable augen gneiss (deformed pegmatites?)

3901 Mafic gneiss

3902 Acid gneiss with garnet, biotite etc (dark, charnockitic appearance)

3903 White garnet / biotite gneiss

Rocks both rather similar to [illegible] type but may be higher grade
Mt [illegible] [illegible] [illegible]
[illegible] 1:500 , vertical

Doggers Ntk

mostly reddish and pyroxene gneiss – charnockitic appearance in H/S.
A few thin 2 pyroxene granulite (mafic) layers. Some diffuse grey pegmatites subconcordant

3904 Charnockitic acid gneiss

Unnamed Ntk ~40 miles W of Knuckey Peaks

Rather massive red gneiss – mod. abundant mafic layers – biotite rich. Banded garn/biot gneiss, possibly some pyroxene in mafic layers (~~[illegible]~~ or hornblende?)

Pink cross-cutting pegmatites with abundant biotite common. Finer-grained, int. layers have abundant biotite & ? pyroxene. Gneisses are complexly folded ([illegible]) dip N at 55° but very variable

3905 Leucocratic, layered biotite (? pyroxene) gneiss – quite well foliated with qtz lenticles

3906 Coarser grained garnet – biotite gneiss

3907 Mafic layer – biotite + ? pyroxene

S Peak of Gromov Ntks

Simpson Pk, Tice R A
2029

(1) [illegible], [layered] gneiss with [illegible] abundant mafic bands. The latter may be amphibolite, [illegible] the acid layers ~~[illegible]~~ have a characteristic appearance. Abundant [illegible] to pink [illegible] pegmatite cuts the ~~mafic~~ gneisses and the country rock [illegible] grey [illegible]. The reddish-brown [illegible] adjacent is the pegmatite. A [illegible] mafic dyke cuts the main [illegible] and is cut by pegmatites.

The mafic gneiss [illegible] locally [illegible]

[illegible] [illegible] [illegible] [illegible] ([illegible])

[illegible] Mafic gneiss ([illegible] [illegible]?)

Litke Nth

McLeod Nth's P. 6, 2131

Very massive rocks by foliated granite gneiss with discontinuous bands and bands of more mafic gneiss

3910 Granite gneiss

The gneiss & contains garnet and pyroxene

Mt Pascoe

Red, massive, homogeneous, weakly foliated gneiss —

3911 Red pyroxene gneiss

Watson Ridge

Red massive weakly banded gneiss with pyroxene —

3912 Acid gneiss

Dip N.W. 30°

12/11/77

Sample Pk, R 13, 3914

Tonagh Island

two brown dykes on E end on small island

① Well layered brown opx qtz feld gneiss, white leucocratic garnet gneiss, mafic pyroxene gneiss, garnet pyroxene gneiss (more garnet rich) etc.
Cut by dolerite dykes
Some shear zones at dyke contact and dykes are locally foliated.
Dip 250/15–20°
[illegible] sandy [illegible], ventifacts in [illegible]. [illegible] & boulders etc.

3913 leucocratic garnet gneiss

3914 brown leucocratic gneiss (? pyx)
3915 more mafic pyx gneiss
3916 mafic pyroxene gneiss
3917 dolerite dyke

Mt Tod – mostly more [illegible] gneiss, but more layered gneiss towards NW end, cut by mafic (gneiss) → dykes.
NW end Mt [illegible] Trail – well layered gneiss cut by mafic dykes with asymmetric

tight folds – steeply plunging.
Point I (SW of Crohn Is) – well layered gneiss with asymmetric fold – steep limb and relatively flat limb (E end of island)

13/1/77 Tonagh Island – NW end

(2)

Well layered metasedimentary gneiss – a wide variety of types –

Opx-Cpx-Pl-Q-felsic gneiss + garnet-qtz-fld gneiss with interlayered magnetite-rich rocks (up to 20%), pyroxenite (some with garnet?), mafic-pyroxene gneiss (locally with garnet?) etc

Discordant dolerite ~10–20 cm across cuts the gneiss and a possibly ol. discordant mafic gneiss. A large dyke at the NW tip is probably metamorphosed with local development of garnet in planar zones (? shear). Small faults deform the thin dolerite

garnet ~~-~~ quite abundant
Dip 140°/75

3918 Garnet quartzite
3919 Magnetite-quartz rock
3920 Pyroxenite
3921 Mafic pyroxene gneiss
3922 Mafic garnet pyroxene gneiss
3923 Pyroxene gneiss
3924 Discordant, thin dolerite dyke
3925 Mafic ~~to~~ gneiss (possibly m/m dyke) — cut by 3924
3926 Massive dolerite dyke
3927 Pane dyke and development of garnet along shear zones
3928 ? Dolerite — pane dyke as above near contact
3929 Garnet pyroxenite (?)
3930 Garnet-mica gneiss
3931 Pyroxenite
3932 Garnet gneiss

Boudinage structures quite common

① Mt Pardoe

Biotite ± garnet pegmatite and layered (leucocratic) garnet-bearing felsic gneiss and garnet-pyroxene-bearing felsic gneiss

Near the pegmatite the garnet (± pyroxene) are replaced by biotite

Less range of rocks than last locality, but still quite well banded

3933 Leucocratic garnet gneiss

3934 Mafic-retrogressed (ga → hbl)

3935 Mafic garnet-pyroxene gneiss (dark grey)

3936 Mafic-retrogressed (px → hbl)

Dip 210/15

Pegmatite trend 180°

② NE corner of Mt Pardoe

Layered mafic garnet-pyroxene gneiss (dark grey) — some are more layered; garnet-rich gneiss; leucocratic garnet-quartz-feldspar gneiss; mafic pegmatite-rich rock (up to 25% pegmatite)

[illegible] dyke [illegible] dyke
[illegible] ms to be [illegible]

Pegmatite (white) — with muscovite + garnet, muscovite - retrogression near contacts (garn → biot etc)
prob. amphibolitization of mafics

Dyke 290/30°
Trend of Peg = 040
Dyke trend ≈ ~110°

3937 Well foliated magnetite rock
(foliation is stronger near pegmatite — possibly a shear zone)
3938 Amphibolite from near pegmatite
3939 massive grey garnet grain
3940 Sst conformable (prob. sl. discordant) mafic bodies (2m thick)
3941 Diorite dyke (~1m thick)
(*) 3942 Muscovite from pegmatite (possibly for dating)

③ [illegible] SE [illegible]

Dip 290/70 at granulite [illegible]
below Landing Stn.

[illegible] massive (but conformable and
foliated) granulite gneiss with rare
garnet ± / or pyroxene

Layered mafic pyx gneiss, [massive] leucocratic
white garnet gneiss, layered pyx garnet
gneiss etc. Some evidence of
retrogression locally (gar → biotite)

Dip at Landing site 030/25

[illegible] summit (S) [illegible] ridge – [illegible]
[illegible] summit [illegible] 25

3943 massive qtz feld gneiss
3944 leucocratic garnet gneiss
3945 mafic pyroxene gneiss

Priestley Peak

① Map 164/25

Hydro-cutting garnet gneiss (mostly concordant) with major pegmatite and [illegible]; much less concordant but all is well foliated.

Dolerite dykes — 2 trend (150 & 060) look similar — the thicker is 1 m thick, the other (150 trend) [illegible] 2 thin (converging)

alkaline dykes trend 030°. They are up to 1 m thick (down to 2 cm in thin veins) and contain [illegible] and ? melilite

? Melilite [illegible] crystals are surrounded by [illegible]. Some is rather [illegible] [illegible] melilite with [illegible] (rather) irregular. The alkaline dykes cut the dolerites, but relations of the dolerites [illegible] uncertain

Near the alkaline dykes there is much retrogression in garnet gneiss (~30 cm ~~wide~~ wide [illegible] [illegible] etc)

3946 Garnet gneiss.

Contd.:

SW Part of Mt. T cobbly folded grey & reddish gneiss (garnet, granulitic gneiss)
Dip & strike rather variable but dips are mostly about SW.

At SE corner – large recumbent fold in strongly layered gneiss
Steep dips in cliffs
NE cliffs & outcrops E, of grey/brown layered pyroxene gneiss, mostly.

3947 Thick dolerite dyke
3948 Thin dolerite dyke
3949A-D Alkaline dyke (rel. coarse grained)
3950 Rel. fine grained alkaline dyke
3951 A–C Layered alkaline dyke
3952,3,4 Dolerite/alkaline dyke contact
3955 Thin vein of alkaline dyke
3956 Vein of zeolite in dolerite

Outcrop just E of Priestley Peak

(2) Dip [illegible] 30/45

~~[illegible]~~ Brown [illegible] folded gneiss
Quite ~~[illegible]~~ well layered compositionally, but much less variable composition than rocks at locality 3957A Pyroxene gneiss

Mt Trail — NW end — str layered gneiss tightly folded, axial plane rel steeply dipping — more massive reddish gneiss on S side, towards SE end. Cut by dykes.

Mt Tod — large, tight fold, axial plane dipping ~ 30° to NW (estimate only)

③ Priestley Peak

Pyroxene gneiss – strongly layered, folded to W, with interbanded leucocratic garnet gneiss, garnet-pyroxene gneiss and mafic pyroxene gneiss. Some coarse grained black pyroxenite bodies up to 30-40m long.

Dip 345 / ~30°

Dolerite dykes, – several trends including 100°

no alkaline dykes noted

395·7B Dolerite dyke

3918 Mafic Pyroxene gneiss

Simpson Pk P13, 0425

① **Robertson Peak** – N side, ½ way along ridge near basic dyke.

Dip – subhorizontal

Massive, reddish pyroxene gneiss with rather indistinct layering. Cut by many fresh dolerite dykes

Dip ~ W at ~5°

Trend of dyke ~ 160°

3961 Dolerite dyke

① E end — layered gneiss (Simpson Pk R 14 0634)
Dip N at 40°–50°
Massive reddish layers are
garnet gneisses, some with elongated
blunt quartz; interlayered
with leucocratic garnet gneiss
and more mafic pyroxene
gneiss. In cliffs of interlayered
recumbent folds (axis dipping N
at low angles) are visible
3962,3 Massive garnet gneiss
3964 Pyroxene gneiss

Unnamed Nunatak 3mls E of Mt Charles

Simpson Pk R12, 0533

① Strongly layered ± pyroxene ± garnet gneiss,
massive garnet gneiss (light grey),
mafic pyroxene gneiss
Strike 070, vertical near
landing site. Large tight
folds in ice to N of landing

[illegible]

[illegible] dip ~ 45°
to N

A few garnet qtz feld pegmatites
(irregular, a few cms thick)
are present. Some brecciation in vertical
garnet gneiss (cl. deformed)

3965 Garnet gneiss
3966 Mafic pyroxene gneiss

② Unnamed Nunatak 3-4 mls SE of Mt Charles

Similar rock to last locality and
to rock immediately to the
east —

Leucocratic garnet gneiss,
more layered garnet gneiss,
mafic pyroxene gneiss etc.
Dip 180-190 / ~ 60°
Layered rocks at landing site
more massive rocks to the S.

3967 Leucocratic garnet gneiss
3968 Garnet gneiss
3969 Massive, layered [illegible]

① Mt Charles — near N end

Simpson Pk R11, 1111

Well layered garnet qtz feld gneiss / leucocratic, with more mafic pyroxene gneiss and some rather friable, rusty weathering garnet gneiss with ? sillimanite.

Biotite is present in some of the garnet gneisses, & is fairly abundant.

The garnet [illegible] [illegible] [illegible] [illegible] [illegible] ☒

Dip is ~ 0?0/50 at [illegible], [illegible], [illegible] [illegible] the [illegible] [illegible] wind scour [illegible] is marked.

Dolerite dyke trends 180°.

3970 Garnet gneiss (+ sillimanite?)
3971 Garnet gneiss (+ sillimanite & biotite?)
3972 Pyroxene gneiss
3973 [illegible] [illegible] [illegible]

The pyroxene gneisses are rather more mafic and finer grained (~1 mm). They are associated with strongly foliated qtz feld gneiss with a "granulitic" [illegible].

Mt Bennett — thin spur at NE end

① massive red 'characteristic' pyroxene gneiss with coarser grained, conformable segregations/veins containing (pyx, qtz, feld) — grey qtz.

more mafic layers are granoblastic fine, even-grained pyroxene granulites

Dp 060/10

1-) cliff is a thick mafic layer may be a metamorphosed dyke — it appears to be slightly discordant, but there is uncertainty

The main summit area consists of more strongly layered, light and dark gneisses, and has undeformed leucocratic dykes

3974 Acid pyroxene gneiss

3975 Mafic pyroxene gneiss

3976 Mafic pyroxene gneiss

(2)

Dip - 300/45

Layered gneiss - Coarse grey garnet porphyroblastic gneiss in sub-conformable segregations, locally discordant and in discrete veins - white feldspar, grey qtz, rare garnet - some evidence of deformation - feldspar augen; and retro gression - replacement of garnet by dark green chlorite or biotite.

Dark grey, finer grained characteristic more layered gneiss with rare garnet - ? pyroxene is intruded by these pegmatite. Also white garnet conglomerate (some retro gression), some more in the ? pyroxene gneiss and felsic granite (vein?) - field relations not seen. All are cut by dolerite dykes

3977 Dolerite

3995 Granite

3994 Garnet leucogneiss from

[illegible] [illegible] make [illegible]
3983 Retrogressed gneiss

③ <u>Grimsley Peaks</u> 2nd Ntk from W (near S end)

reddish
Massive charnockite — very poor foliation (almost indeterminable, best dip at point near landing is 330/70.
Some [illegible] [illegible] a [illegible]
Some bluish or greenish quartz-rich inclusions and lenses (diffuse, [illegible], etc.)
A few grey inclusions are light in colour (almost white) ~~but~~ which contrasts with the dark reddish brown of the charnockite (grey on fresh surface)
3984, 5 Massive charnockite
(with a few feldspar augen - [illegible])
3986 mica-rich [illegible]

④ <u>Eastern Ntk (N end)</u>

Similar to Mt Bennett - layered

[illegible]

[illegible] grey; pegmatitic gneiss —
interlayered, cut by dolerite dykes
Mafic pyroxene gneiss is most abundant
[illegible] ones's was [illegible] – [illegible] pyroxene
in coarser grained, leucocratic layers
Much retrogression locally – [illegible]
[illegible] in fracture zones, (biotite
replacing pyroxene etc.) Amphibolite
in one locality

3987,8 mafic pyroxene gneiss
3989 massive charnockitic gneiss
3990 ? Amphibolitic (in the sheared)

<u>Mt Maines</u> – W side → <u>Mt Cod/McLeod NK 45 R2</u>

(1) Similar to last locality and to <u>127</u>
[illegible] (migmatitic) Layered & pyroxene
gneiss with coarser grained, [illegible]
pyroxene qtz feld rock (pegmatitic
[illegible] [illegible] locally X cutting)
Garnet occurs locally.
Much retrogression, especially
[illegible] [illegible] (x [illegible]
of [illegible] [illegible] in granite

3993-3 Altered pyx q/z fold gneiss (biot → pyx
3994 Biotite gneiss (retrograde)

② Northern nose of 2 mtks NE of Mt Maries

Similar to last locality, but less retrogression
Well layered pyroxene gneisses —
rather migmatitic — pegmatitic layers
with pyroxene + some with garnet
(pyroxene + biotite). — somewhat
banded. On SW side of NBk —
massive charnockitic gneiss.
2 dolerite dykes trend ~ NS
Dip of gneiss 110/80°
Gneiss is fairly light in colour
(unlike massive charnockite)
3995 Biotite pyroxene gneiss (mafic)
3996 Pyroxene q/z fold gneiss
3997 Migmatised (injection) and
gneiss banded
Much diffuse layering, folds, veins, pegmatitic
segregations, etc. Pyroxene and pegmatite
look probably some replacement by
granite

Mt Breckinridge [illegible]

Mostly red, massive charnockitic gneiss [illegible] to [illegible] —
Similar to N Bennett and 1st stop at Grimsley Peaks.
NE 4 km [illegible] of Mt Cordwell is [illegible] red massive charnockitic gneiss

Mt Codrington 18/1/77 Mt Cod/Proc I s R13 2272

(3) NW bordering spur — Base of cliffs on NE side.
Steeply dipping grey gneiss — strongly folded with v. abundant pegmatites (a/g fold hinges; q f amphibole)
Most of the gneiss is leucocratic, with and abundant biotite (some apparently replacing ? pyroxene) — amphibole in more mafic layers. The gneiss is partly mobilised — it becomes virtually [illegible], with clots of mafic [illegible] and is locally intrusive. Layered gneiss bands (some mafic) are

mobilised gneiss

Pegmatites are partly conformable and many are discordant — very variable trends (most are thin (up to 1m or so).

Epidote veins quite abundant, and locally small shears are present. A few layers have garnet and rarely relict pyroxene. Amphibolite also present

3998 Mafic biotite gneiss
3999 Foliated grey and biotite gneiss
4000 ff foliated grey biotite gneiss
4301 Massive biotite granitic gneiss
4302 Massive reddish garnet gneiss
(locally with biotite & / or pyroxene)

Mt Cod R13/2272

(4) Fuel Depot 1921
265 750
298.19 898.12

Wordie Ntk — Mt Cod R5/1044

near summit (flat area)

① Baro 750 265 2000 +6°C

926.64 926.61

Dark purplish grey leucogneiss with garnet and ? pyroxene. ?Good evidence of retrogression (garnet-biotite) . Some lighter grey coarser grained q/f (grey) [illegible] [illegible] [illegible] grains

Pyroxenite pods [illegible] [illegible] [illegible] [illegible] present.

Vertical strike 090 E [illegible]

landing site (different lithologies)

At landing site - platy flattening trends 350 (vertical)

4303.4 Massive acid gneiss

② Mt Bisco Old end (near geo field camp)

Purplish [illegible] [illegible] [illegible] [illegible] [illegible] locality. [illegible] [illegible] [illegible] 95 / field

[illegible]

[illegible] Dip 080/80.
Cut by dolerite dyke (?) (trend 330°)
Most of mt. appears to be of
massive purplish qtz/feld gneiss

4305 massive [illegible] gneiss
4306 white / leucocratic garnet gneiss
4307 Dolerite dyke (?)

(3) [illegible] peak
massive purplish gneiss ([illegible])
[illegible] similar.
Lighter coarser grained garnet leucogneiss
and pink deformed [illegible] (locally
augen gneiss) elsewhere pink feld/grey
qtz gneiss.
Banding [illegible] undulated. Purplish
gneiss [illegible] along [illegible]
Dip ~ 010/10.
Dolerite dyke Trend 020

1310# Dolerite dyke

Rudmose Brown Peak Mt Cool R3/0884

Baro 2154 0°C

750 245

930.95 $931.00

① NW area of rubble - just emerged from ice.

Rocks look similar to Hurley and [illegible] — massive and green with purplish colour & [illegible] evidence of [illegible] garnet in one sample, possibly pyroxene in some. [illegible] [illegible] to basalt.

No rocks in situ.

4311,2 massive [illegible] amphibolite [illegible] [illegible] [illegible]

Mt Oldfield Mt. Pierre-[illegible] F 14, 0830

(1) N end of main peak area
Dip 230/30°
4. Massive reddish charnockitic pyroxene gneiss – poorly foliated little banding, lenses and inclusions of more mafic gneiss (?magmatic) & pyroxenite.
Interlayered with massive white granite (leucogneiss) (also with xenoliths) and mafic pyroxene gneiss.
Dolerite dykes trend N/S and shears 050° (particularly adjacent to ~~[illegible]~~ dyke margins.
Much of Oldfield consists of massive garnet gneiss.
4313,4 massive charnockitic gneiss.
4315 [illegible] qtz feld gneiss
4316 mafic pyroxene gneiss
4317 Dolerite dyke

Mt ~~[illegible]~~ Charles

(1) [illegible] sandy spots as last [illegible] side) Probable alkaline dyke — rather sheared.

4318 Metamorphosed dyke.

4319 Metamorphosed dyke — contact with garnet gneiss

Nbk 4mls NW of Mt Brockelsby

(1) (N. of group) Simpson Pk R 12, 0528

Dip 33°/25

Layered garnet qtz fdd gneiss (grey to white) Mafic pyroxene gneiss and massive reddish and pyroxene gneiss. Similar rocks to Robertson Peak and those [illegible] of Mt Charles. Some of the massive red pyroxene gneiss contain garnet.

4320 massive pyroxene ? garnet gneiss

4321 Grey garnet qtz fdd gneiss

4322 Mafic pyroxene gneiss

Mt Brockelsby Simpson Pk R12, 0527

① [illegible] (~20 m relative highest point

Massive reddish-brown charnockite

pyroxene granulite with zones coarser grained pink felsic / greenish / minor black pyroxene segregations and some thin fine grained mafic layers (pyroxene / felsic)

Dip 160/80°

A dolerite dyke at the S end of the mountain was not approachable

[illegible] the granite has a more granitic character, possibly due to development of leucosome

4323,4 massive grained brown and pyroxene granite

Dip 320/30.

Mt Gordon

① Massive pyroxene qtz feld gneiss with xenoliths (? screens) of mafic gneiss. Pyroxene is probably present in these, but some looks like amphibole.

The acid gneiss is mostly brownish in colour, but some feldspar grains are quite a dark brown (cf Mawson Charnockite), others are cream. Qtz is grey or bluish

4325 Pyroxene gneiss (acid)

4326 Mafic gneiss

Francis Peaks   Simpson Pk R13, 0439

① S peak - base of SE ridge. (SW side)

Massive charnockite gneiss

Little layering apparent, apart from coarser grained quartzofeldspathic layers. V. little mafic gneiss, although [illegible] [illegible] layers are present.

[illegible] [illegible] [illegible] present in some of the acid gneiss, in addition to pyroxene

[illegible] of the [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]

Dolerite dykes are present, including the [illegible] to the S of [illegible]
Peaks (~50 m)

Dips are mainly to the NW (mod to steep) but at the landing spot the dip is 020/80

4327,8 Massive reddish charnockitic pyroxene gneiss

(2) <u>Small Nuk on SW of S[illegible] Peak.</u>

Massive red charnockitic pyroxene gneiss, similar to last locality – some garnet present locally. Minor [illegible] & [illegible] [illegible]. [illegible] [illegible] [illegible]
[illegible] Trend 210 vertical

Cut by fresh dolerite dyke

4329 Massive red charnockitic gneiss. (pyroxene + ? garnet).

Barkell Nick

(1)

Massive reddish charnockitic pyroxene granulite with some mafic pyroxene granulite. Similar to last localities. Some more mafic gneiss and some garnet gneiss locally.

Discordant(?) retrogression zones are present. Gneiss is bleached, deformed and mafics replaced by biotite.

Dip at S end is ~330/70

4330 massive reddish charnockitic gneiss

25.1.77

Pythagoras Peak

NE corner mostly reddish, massive charnockitic gneiss

Summit 200 T some massive gneiss with some lighter interlayered gneiss

Mt Rugby – Similar to Pythagoras – interlayered red massive gneiss, light coloured gneiss etc.

Mt Miller (SW) Rather massive gneiss + interlayered banded gneiss (light coloured) with thin basic dykes. NW is similar

Mt Bartlett E well layered gneiss, cf Sapphire Hill. (complexly folded) W half is similar ~~[illegible]~~ with ~~[illegible]~~, thick dykes

Mt Codrington R 3, 0907

Mt Storer S E spur – saddle area

① Mod well layered pyroxene gneiss – massive reddish charnockitic gneiss, well banded, more mafic pyroxene gneiss (grey to dark grey) and pyrox garnet qtz feld gneiss (not the thin leucocratic garnet gneiss

(how much) a few thin epidote veins + blue quartz veins

Some of the layered gneisses have a strong lineation (mineral aggregates) and a few tooth relatively deformed — feldspar augen (rare) — well layered gneiss

4331 Reddish, coarse grained granitic gneiss

4332, 3 Massive grey pyroxene gneiss (+ some hornfels)

4334 Mafic pyroxene gneiss

Mt Letten ridge on S side

(2) Similar to last locality

Mostly massive charnockitic gneiss with interlayered mafic pyroxene gneiss and some garnet/quartz gneiss (rather rusty weathering)

Deformed basaltic dykes (broken and folded)

biotite and/or amphibole replace pyroxene etc. Int to mafic gneiss becomes black and white (layered) — possibly some deformation and alteration (colour change in feldspars — to white)
The massive reddish gneiss becomes more purple in colour (again colour change in feldspars)
of the Biscoe area.
Thin mylonite zones etc are present

4335 massive charnockitic gneiss (rather altered)
4336 Altered gneiss (amphibole / biotite

Dip ~ 180 - 210 and 10-20°

W side of Mt. Bartlett is similar gneiss